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colloids hold for all hydrophilous colloids with which they have to deal, protein as well as carbohydrate. This work seems to make evident the error of such a general assumption.

A quotation from the last paper gives the author's view of the physiological significance of these results. "The general identity of constitution of these colloidal mixtures and of cell-masses, and the obvious similarity of their behavior, together with newly determined features of carbohydrate metabolism not described in this paper, make it possible to correlate more closely the processes of imbibition, metabolism, and growth, and on the bases of these interrelations, to interpret growth enlargement and incidental variations in volume and size of organs." No doubt many will differ from a statement in another part of the paper that amorphous carbohydrates form a very important part of the plant protoplast. There seems little evidence that amorphous carbohydrates (excepting starch, which would have no bearing here) are general constituents of the plant protoplast. When amorphous carbohydrates are constituents of the protoplast they generally appear as discrete particles of micronic size and not in intimate mixtures with proteins and distributed in particles of submicronic or amicronic size, as must have been the case in the agar gelatine mixtures with which the authors worked. Of late we are coming to know that amorphous carbohydrates of the walls and intercellular spaces have considerable physiological controlling action. This is especially true in seeds. This work is very suggestive in this connection also.

This work may have a very important bearing on the daily transpiring power of certain of the cacti as found by various workers in the Desert Laboratory. In these there is apparently no stomatal regulation, and the lowest transpiring power is during the day. This corresponds to the daily change in acidity. The time of low transpiring power is the time of low acidity, when, according to the findings of MacDougal and Spoehr, the gels of the tissues will have the greatest power to take up and hold water. With this no doubt there will be a rise in viscosity. These physical conditions will all tend to lower the rate of movement of water toward the intercellular spaces and to lower the vapor pressure within those spaces. This in turn will lower the rate of outward diffusion. This suggested relation needs careful investigation. On the basis of the behavior of protein gels the daily variation in the transpiring power of the cacti was not intelligible. This work should be a great stimulus to much work along similar lines.—Wm. Crocker.

Taxonomic notes.—Britton,[16] in continuing his studies of West Indian plants, has described new species in *Cleome*, *Chamaecrista* (3), *Leucocroton* (3), *Passiflora* (3), *Rondeletia* (10), *Eriocaulon* (3), *Dupatya*, *Pilea*, *Ichthyomethia*,

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[16] Britton, N. L., Studies of West Indian plants. IX. Bull. Torr. Bot. Club **44**:1–37. 1917.

Castelaria, and *Stenostomum* (2). There is a synopsis of the species of *Chamaecrista* in the West Indies (31 spp.); of the Cuban genus *Leucocroton* (7 spp.); of *Passiflora* in Cuba (21 spp.); and of *Rondeletia* in Cuba (35 spp.).

DECANDOLLE,[17] in a study of specimens of Meliaceae from Central America and Panama sent by the United States National Museum, has described 9 new species in *Guarea* and 2 in *Trichilia*.

HEDGCOCK and HUNT[18] have described 5 new species of *Peridermium* on pine needles in the eastern United States.

KERN,[19] in a monograph of the North American "sedge rusts," recognizes 19 species of *Puccinia*, 3 of which are described as new.

PENNELL,[20] in continuing his studies of our southern plants, has presented the genus *Chamaecrista* as represented in the United States. He recognizes 13 species, which include 3 new species and 2 new combinations.

WAGER[21] has published a list of the mosses of South Africa, which for the first time brings together all the known mosses of South Africa. The list includes 846 species in 160 genera, representing 37 families. The names of 27 new species, representing 23 genera, are also included, one of the genera (*Physcomitrellopsis*) being new. These will be described and published later.

WILLIAMS,[22] in reporting the mosses obtained on a collecting trip in the Philippine Islands, extending from October 1903 to August 1905, lists 240 species in 118 genera. Of these, 27 species and 3 genera (*Rhabdoweisiella*, *Pseudopohlia*, *Stereodontopsis*) are described as new.—J. M. C.

Endosperm color in maize.—In crosses between California Golden Pop maize and a white endosperm variety obtained from HAAGE and SCHMIDT under the name *Zea Caragua*, WHITE[23] finds white dominant. These results are interpreted by assuming the presence of an endosperm suppression factor *A* in the *Zea Caragua* in addition to the usual color factor *y*. This new primary factor affecting endosperm color raises the number of such factors to three; in addition there are numerous secondary factors.—E. M. EAST.

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[17] DECANDOLLE, C., Meliaceae Centrali-Americanae et Panamenses. Smithson. Miscell. Coll. **68**:no. 6. pp. 8. 1917.

[18] HEDGCOCK, GEO. G., and HUNT, N. REX, New species of *Peridermium*. Mycologia **9**:239–242. 1917.

[19] KERN, FRANK D., North American species of *Puccinia* on *Carex*. Mycologia **9**:205–238. 1917.

[20] PENNELL, FRANCIS W., Notes on plants of the southern United States. III. Bull. Torr. Bot. Club **44**:337–362. 1917.

[21] WAGER, H. A., A check list of the mosses of South Africa. Publ. Transvaal Museum, Pretoria. pp. 20. 1917.

[22] WILLIAMS, ROBERT S., Philippine mosses. Bull N.Y. Bot. Garden **8**:331–378. *pls. 171–174.* 1917.

[23] WHITE, ORLAND E., Inheritance of endosperm color in maize. Amer. Jour. Botany **4**:396–406. 1917.